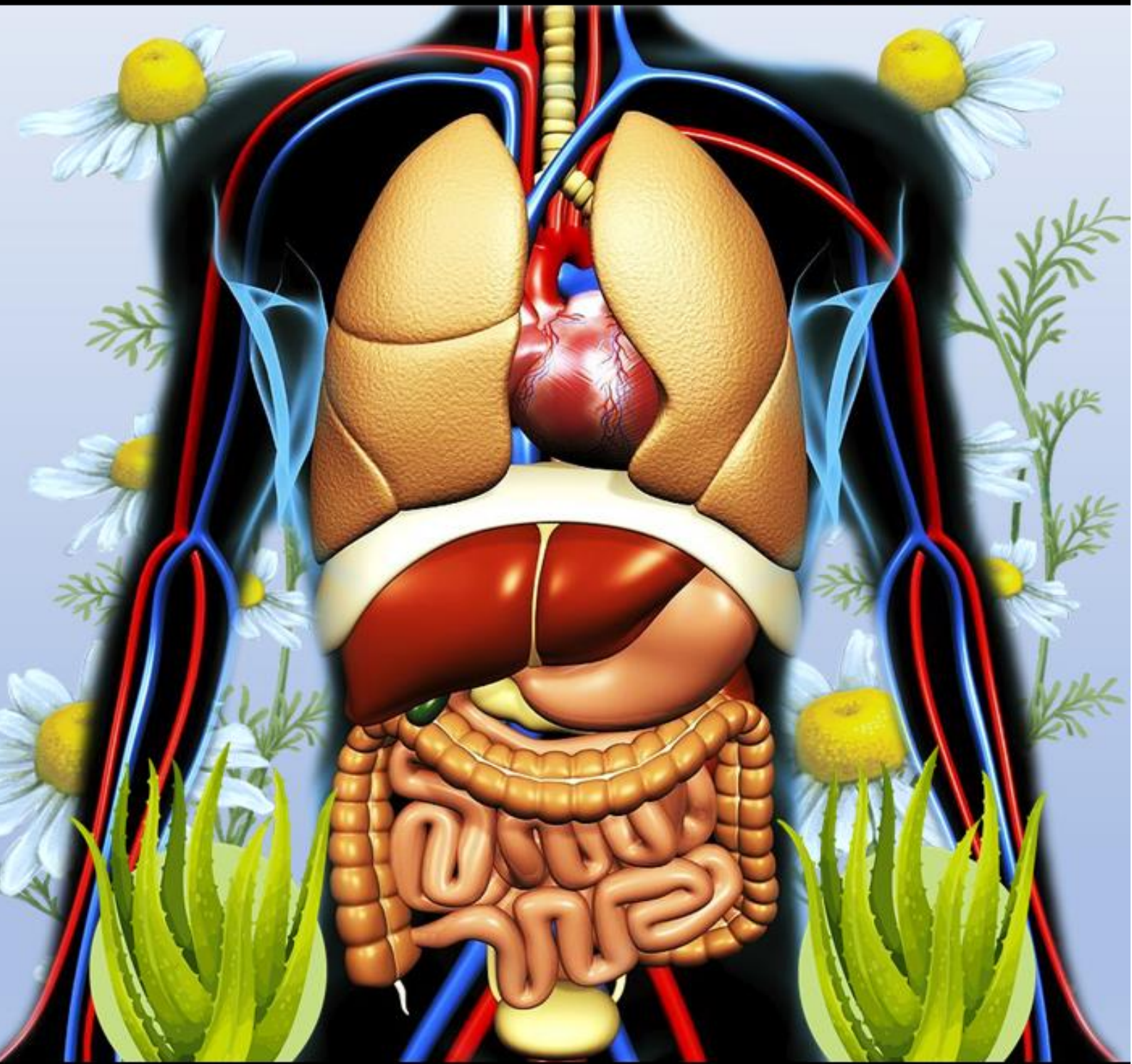


# Basics of Phytotherapy



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# **Respiratory Tract Problems**

## **Phytotherapy**

### **Lecture 2**

# Respiratory Tract Problems

**Upper Respiratory tract problems** {Allergic rhinitis – common cold – Influenza - tonsillitis – pharyngitis – sinusitis}

**Lower Respiratory tract problems** {Cough - Asthma – bronchitis}

## Allergic Rhinitis {Hay Fever}

Inflammation of the lining of the nose due to dust, fibers and pollens

### Treatment

- **Butter bur:** Contains sesquiterpene acts as antihistaminic  
{Root is Hepatotoxic as it contains pyrrolizidine alkaloids}
- **Peppermint oil:** Decongestant inhaled
- **Eucalyptus oil:** Decongestant inhaled

## Common cold

Viral infection not reaching lungs

### Treatment

- Iceland moss:** Contains mucilage {Demulcent}
- Elderberry:** Contains flavonoids and cyanogenic glycoside antiviral
- Linden** {Tilio}: Flavonoids and volatile oils diaphoretic,
- Marshmallow:** Mucilage and flavonoids Demulcent and antimicrobial
- Colts foot** {Tussilago}: Mucilage, tannins {Demulcent and immunostimulant  
{Contains pyrrolizidine alkaloid Toxic}}
- Cinnamon:** Diaphoretic
- Echinacea:** Contains Echinacin Polyphenolic glycoside {immunostimulant}
- Astagalus:** Polysaccharides, flavonoids {immunostimulant}
- Nigella sativa:** Thymoquinone volatile {immunostimulant}
- Citrus fruits:** Vitamin C {immunostimulant}

## Influenza

Viral infection reaching lung (more severe)

### Treatment

Same as Common cold + **Mullein** {*Verbascum* - آذان الدب}: Contains mucilage Demulcent

## Tonsillitis

Inflammation of tonsils

### Treatment

**Sage** {*Salvia officinalis*}: V.O, flavonoids and phenolics {Antimicrobial}

**Liquorice lozenges**: {Antimicrobial}

**Marshmallow**: Demulcent

## Pharyngitis

Inflammation of the pharynx {Back of the throat}

### Treatment

**Sage** {*Salvia officinalis*}: V.O, flavonoids and phenolics {Antimicrobial}

**Liquorice**: {Antimicrobial}

Marshmallow: Demulcent

## Sinusitis

Inflammation of sinus gland

### Treatment

Decongestants like menthol and eucalyptus {inhalation}

## Dry cough

Cough where no phlegm or mucus is produced (Non-productive)

### Treatment

**Mucilage**: As protective layer and demulcents e.g. linden, marshmallow, colts foot (tussilago)

**Volatile oils:** Thyme, anise and guava leaves antitussive decrease sensitivity of peripheral and central cough receptors.

**Opiates:** like codeine central anti-tussive {Overdose results in respiratory depression}

**Wild cherry:** Prunasin cyanogenic glycoside.

## Productive cough

Cough produces mucus or phlegm (sputum)

### Treatment

**Expectorants:** Ivy leaves, Primula, liquorice, and senga {irritate GIT - Reflex expectorant}

## Asthma

Disease that causes the airways of the lungs to swell and narrow, leading to wheezing, shortness of breath, chest tightness, and coughing.

### Treatment

**Bronchodilators:** lobelia lobeline, ephedra ephedrine, stimulate the B<sub>2</sub> receptors increases ciliary activity and liquefies mucous palpitation and hypertension

**Expectorants:** Reflex expectorants like senega (snake root) triterpenoid saponin senegin irritate GIT Reflex expectorant, Ipeca saponin, liquorice, Ivy Hydra helix saponins, Primula triterpenoid saponins, Balsam tolu Benzyl cinnamate {Direct acting expectorant and antiseptic}

**Volatile oils {Expectorants}:** Eucalyptus oil {cineole}, Thyme oil {thymol}, Anise oil {anisole}

## Bronchitis

Inflammation of the lining of your bronchial tubes, which carry air to and from your lungs.

**Acute Bronchitis:** {Upper respiratory tract}

**Chronic Bronchitis:** {Lower respiratory tract}

### Treatment

**Expectorants:** Lobelia {Lobeline – Nicotinic receptor antagonist}

**Bronchodilators:** Ephedra {Ephedrine  $\beta_2$  Stimulant}, Lobelia {Lobeline}

**Antimicrobial:** Menthol {Anti-microbial – Bronchodilator}